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Claims

1. (original) A method for evaluating the data from a system for detecting objects, in particular for a motor vehicle, in which

- with a radar sensor, the radar signals reflected from the object are processed to ascertain the distance (d) and/or the relative or approach speed (Cv) of the object, characterized in that

- the digital signals of at least one channel (I, Q) of the radar sensor are processed until a first evaluation capability is obtained as a distance signal (d) or as an approach speed signal (Cv); and that

- a mode switchover (4) for the evaluation as a distance signal (d) as an approach speed signal (Cv) is effected, with which it is defined which data will be ascertained and made available to an interface (6) between the radar sensor and a downstream control unit (7).

2. (original) The method as recited in claim 1, characterized in that

- the digital signals from at least one channel (I, Q) of the radar sensor, after each sampling operation, are delivered to a data buffer with a predetermined slot width and then, within the slot width, are processed (1, 2) by means of a median filtration operation; and that

- the thus-processed signals are further processed jointly in the following evaluation modes (3, 5, 6).

3. (currently amended) The method as recited in claim 1 ~~or 2~~, characterized in that

- within a first evaluation mode for distance measurement (d), the digital signals are subjected to a background correction and after that a rationalization of the signal to be evaluated is performed (3).

4.(original) The method as recited in claim 3, characterized in that

- the digital signals are processed (3) with a matching filter.

5. (currently amended) The method as recited in ~~one of claims 3 or 4~~ claim 3, characterized in that

- within a second evaluation mode for measuring the approach speed (Cv) of the object, the background correction and the rationalization are skipped.

6. (currently amended) The method as recited in ~~the one of the foregoing claims~~ claim 1, characterized in that

- when there is more than one channel (I, Q) in the radar sensor, a gain compensation (3, 4) is performed at different levels of the channels (I, Q).

7. (currently amended) The method as recited in ~~the one of the foregoing claims~~ claim 1, characterized in that

- the signals processed in the evaluation modes are subjected to a data compression (5).

8. A (currently amended) circuit arrangement for performing the method as recited in ~~one of the foregoing claims~~ claim 1, characterized in that

- in the radar sensor, there are storage means and computation modules for performing and switching over the evaluation modes; and that

- in the radar sensor, there is an interface controller (6), by which the radar sensor can be connected to a downstream control unit (7).

9. (original) The circuit arrangement as recited in claim 8, characterized in that

- the interface controller (6) is constructed such that the data are prepared for connection to a standardized bus system (CAN bus).

10. (currently amended) A data processing program for performing the method as recited in ~~one of claims 1 through 7~~ claim 1 and/or for controlling the storage means and/or the digital computation modules ~~as recited in one of claims 8 or 9.~~